

5-205

PCT/FR2003/002778

PATENT COOPERATION TREATY



## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Translation

Applicant's or agent's file reference BR3510JCM/AMM	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR2003/002778	International filing date ( <i>day/month/year</i> ) 22 septembre 2003 (22.09.2003)	Priority date ( <i>day/month/year</i> ) 24 septembre 2002 (24.09.2002)
International Patent Classification (IPC) or national classification and IPC C22C 21/00, H01G 9/045, 9/055, C22F 1/02, 1/04		
Applicant PECHINEY RHENALU		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 25 mars 2004 (25.03.2004)	Date of completion of this report 15 April 2004 (15.04.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FR2003/002778

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
pages \_\_\_\_\_ 1-7 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages \_\_\_\_\_ 1-4 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP 03/02778

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1 - 4	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 4	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 4	YES
	Claims		NO

**2. Citations and explanations****NOVELTY AND INVENTIVE STEP (PCT Article 33(2)-33(3))**

Document JP-A-04 062820 (D1), which is cited on page 2 and is regarded as the closest prior art, discloses an aluminium sheet which is more than 99.9% pure and contains 1-50 ppm C. The concentration in a superficial layer less than 0.1 micron thick is five to 300 times higher than in the core of the sheet. There is no mention in D1 of any aluminium carbides which may possibly be formed.

The process in D1 consists of a superficial carbon deposition in the gaseous phase, followed by thermal treatment in a vacuum, rather than by a final annealing step in an atmosphere that contains an inert gas together with a gas that contains carbon atoms, as in the process defined in claim 3. This step defined in claim 3 makes it possible, according to page 5 of the description of the application, to obtain the product as per claim 1 and, in particular, the specified superficial aluminium carbide content.

Consequently, D1 does not disclose, either explicitly or implicitly, the superficial aluminium carbide content specified in claim 1; the subject matter of claim 1 is

therefore novel.

The problem solved by the specified superficial aluminium carbide content is that of providing a thin aluminium sheet or strip which increases capacitor capacity.

Since none of the available prior art documents discloses or suggests the differentiating features to solve the problem, the subject matter of claim 1 is considered inventive.

The process as per claim 3 includes the features of the product as per claim 1 and its subject matter is therefore also considered novel and inventive.



# TRAITE DE COOPERATION EN MATIERE DE BREVETS PCT

## RAPPORT D'EXAMEN PRELIMINAIRE INTERNATIONAL

(article 36 et règle 70 du PCT)

REC'D 16 APR 2004

WIPO PCT

Référence du dossier du déposant ou du mandataire	<b>POUR SUITE A DONNER</b> voir la notification de transmission du rapport d'examen préliminaire international (formulaire PCT/PEA/416)	
Demande internationale No. PCT/FR 03/02778	Date du dépôt international (jour/mois/année) 22.09.2003	Date de priorité (jour/mois/année) 24.09.2002
Classification internationale des brevets (CIB) ou à la fois classification nationale et CIB C22C21/00, C22C21/00		
Déposant PECHINEY RHENALU et al.		
<p>1. Le présent rapport d'examen préliminaire international, établi par l'administration chargée de l'examen préliminaire international, est transmis au déposant conformément à l'article 36.</p> <p>2. Ce RAPPORT comprend 4 feuilles; y compris la présente feuille de couverture.</p> <p><input type="checkbox"/> Il est accompagné d'ANNEXES, c'est-à-dire de feuilles de la description, des revendications ou des dessins qui ont été modifiées et qui servent de base au présent rapport ou de feuilles contenant des rectifications faites auprès de l'administration chargée de l'examen préliminaire international (voir la règle 70.16 et l'instruction 607 des Instructions administratives du PCT).</p> <p>Ces annexes comprennent feuilles.</p>		
<p>3. Le présent rapport contient des indications et les pages correspondantes relatives aux points suivants :</p> <ul style="list-style-type: none"><li>I <input checked="" type="checkbox"/> Base de l'opinion</li><li>II <input type="checkbox"/> Priorité</li><li>III <input type="checkbox"/> Absence de formulation d'opinion quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle</li><li>IV <input type="checkbox"/> Absence d'unité de l'invention</li><li>V <input checked="" type="checkbox"/> Déclaration motivée selon la règle 66.2(a)(ii) quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration</li><li>VI <input type="checkbox"/> Certains documents cités</li><li>VII <input type="checkbox"/> Irrégularités dans la demande internationale</li><li>VIII <input type="checkbox"/> Observations relatives à la demande internationale</li></ul>		
Date de présentation de la demande d'examen préliminaire internationale 25.03.2004	Date d'achèvement du présent rapport 15.04.2004	
Nom et adresse postale de l'administration chargée de l'examen préliminaire international  Office européen des brevets D-80298 Munich Tél. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Fonctionnaire autorisé N° de téléphone +49 89 2399- 	

PCT/FR 03/02778

## Formulaire PCT/PEA/409 (janvier 2004)

**RAPPORT D'EXAMEN  
PRÉLIMINAIRE INTERNATIONAL**

Demande internationale n°

**PCT/FR 03/02778**

6. Observations complémentaires, le cas échéant :

**V. Déclaration motivée selon l'article 35(2) quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration**

1. Déclaration Nouveauté	Oui:	Revendications	1-4
	Non:	Revendications	
Activité inventive	Oui:	Revendications	1-4
	Non:	Revendications	
Possibilité d'application industrielle	Oui:	Revendications	1-4
	Non:	Revendications	

2. Citations et explications

**voir feuille séparée**

**PARTIE V - NOUVEAUTE ET ACTIVITE INVENTIVE (Art. 33(2)-(3) PCT)**

Le document JP-A-04 062820(=D1), cité page 2 et considéré comme le plus proche, divulgue une feuille en aluminium de pureté supérieure à 99.9% contenant 1-50 ppm C. La concentration dans une couche de surface de profondeur de moins de 0.1 micron est de 5 à 300 fois supérieure à celle à coeur de la feuille. D1 est silencieux quant aux carbures d'aluminium éventuels formés.

Le procédé de D1 consiste en le dépôt du carbone en surface par déposition sous forme vapeur suivi d'un traitement thermique sous vide et non pas, comme dans le procédé selon la revendication 3, par un recuit final sous atmosphère contenant un gaz neutre accompagné d'un gaz présentant des atomes de carbone. Cette étape de la revendication 3 permet, d'après la description de la demande, page 5, d'obtenir le produit de la revendication 1 et, en particulier, la teneur en carbure d'aluminium superficielle spécifiée.

Par conséquent, D1 ne divulgue ni explicitement ni implicitement la teneur en carbure d'aluminium superficielle spécifiée à la revendication 1 et, donc, l'objet de la revendication 1 est nouveau.

Le problème résolu par la teneur en carbure d'aluminium superficielle spécifiée est de fournir une feuille ou bande mince en aluminium permettant d'augmenter la capacité des condensateurs.

Comme aucun des documents antérieurs disponibles ne divulgue ou ne rend évident les caractéristiques différentes de telle façon que le problème soit résolu, l'objet de la revendication 1 est considéré comme inventif.

Le procédé de la revendication 3 contient les caractéristiques du produit de la revendication 1 et, donc, son objet est également considéré nouveau et inventif.